ABSTRACT OF THE DISCLOSURE

Distortion discrimination circuitry for digital radio receivers and corresponding methods are disclosed that accurately and efficiently discriminate distortion events, including impulse noise and multipath distortion events, to improve the quality of audio output signals. The distortion discrimination circuitry monitors and analyzes the demodulator output to determine when a distortion event has occurred and provides an appropriate indication signal for use by other circuitry within the radio receiver. More particularly, the distortion discrimination circuitry includes impulse noise circuitry that looks for high frequency noise in both the magnitude and multiplexed outputs of the demodulator to determine the occurrence of impulse noise distortion events. The distortion discrimination circuitry also includes multipath circuitry that looks for a drop-off in signal power between the multiplexed output of the demodulator and a moving average version of that same signal to determine the occurrence of multipath distortion events. In addition, stereo decoder circuitry modifies the audio output signals in response to indications of distortion events.